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CHAPTER 3: PUBLICATIONS

A. Overview

1. What is a publication?

A publication is information distributed to the public through communications media, including:

- books (monographs, biographies, reference works, bound collection catalogs, exhibition catalogs, coffee table books, and similar works)
- articles in journals or newspapers
- pamphlets (site bulletins, fliers, brochures, or special handouts)
- archival finding aids such as repository-level guides, indices, databases mounted on the Web, or folder lists
- motion picture films, filmstrips, and commercial programmatic videotapes
- sound recordings
- research reports
- published slide show packages and mass-distributed portfolios of prints and photographs
- CD-ROMs containing software, games, and virtual museum tours
- Internet sites such as the World Wide Web

For a glossary of terms used in this chapter, refer to *Museum Handbook*, Part III (*MH-III*), Appendix A.

What kinds of publications use museum collections?

Many kinds of publications may use NPS museum collections including:

- Educational publications:
 - textbooks
 - curricula and lesson plans
 - long-distance learning courses that stay online after completion
 - NPS films and educational videos
 - interpretive publications
 - World Wide Web and other Internet publications

- CD-ROM educational packages
- Scholarly publications:
 - books (scholarly studies incorporating elements from natural history and cultural resources collections and archival images)
 - periodicals
 - museum exhibition catalogs
 - museum collection catalogs
 - catalog raisonnes (complete in-depth listing and analysis of all works by an artist or school of artists)
 - union catalogs (a collection catalog that documents the collections of multiple repositories or parks, such as all park museum collections in the Midwest)
 - archival and manuscript-finding aids
 - research reports
- Popular publications:
 - heritage tourism, heritage education and travel books
 - popular survey volumes on a variety of topics
 - television programs
 - Web and other Internet pages
- Administrative publications:
 - General Management Plans
 - Collections Management Plans
 - Administrative Histories
 - reports of various kinds
- 3. How does the park benefit by using museum collections in publications?

The park benefits by:

- allowing the public, staff, and scholars to see our collections, often for the first time, since less than 1% of our museum holdings are exhibited at any given time
- enriching heritage education and tourism

- providing physical evidence of the past for scholarly study, allowing parks to obtain new interpretations, understandings, and knowledge based on their natural history, ecosystems, history, and material culture resources
- allowing access to information on NPS collections without physical risk to the collection
- attracting significant outside researchers, institutions, and publishers to NPS resources for future collaborative projects in education and interpretation
- enhancing park and center visibility and developing a strong national and international community of park advocates who care about preserving NPS resources and making them accessible
- capturing in print a snapshot of park resources for future use as baseline data and research resources and to document and mitigate changes in the resources
- illustrating why NPS requires funding to preserve and make accessible these collections
- 4. Where can I find additional information on developing publications?
- Take courses at your local college in:
 - research methodology
 - writing
 - editing
 - design and layout
 - desktop publishing
 - indexing
- Search the World Wide Web writing sites posted on the curatorial bulletin board on cc:Mail or via a search engine.
- Borrow or buy books on the subject.
- Talk to other NPS staff who prepare publications, for example, the editors of NPS journals, such as *CRM* and *Common Ground*, and the DOI newspaper *People*, *Land*, *and Water*.
- Talk to cooperating association staff who work on publications.
- Work with Harpers Ferry Center and Denver Service Center's Publication Office and your park or regional printing coordinator.

- Form a partnership or develop a cooperative agreement with a local publications expert, such as a university press or other museum publication staff.
- Hire and work alongside a qualified contractor

M. Legal Issues Specific to Publications Using Museum Collections

The laws affecting publications using museum collections include copyright, the Freedom of Information Act, privacy legislation, publicity legislation, obscenity legislation, and laws on historic resources, endangered cave resources, and archeological resources preservation. This legislation is described in *MH-III*, Chapter 2, Legal Issues.

N. User Requirements

 What NPS policies and procedures must a researcher and publisher agree to follow when using NPS museum collections in a publication?

Researchers must complete researcher registration forms, copyright and privacy statements, and researcher duplication forms described in *MH-III*, Chapter 1, Evaluating and Documenting Museum Collections Use, Section H, User Qualifications. Also see *MH-II*, Appendix D, Museum Archives and Manuscript Collections, Figures D.13-18 for sample forms. *MH-III*, Chapter 1, Section I, Documentation, provides more information.

As a publisher, you must:

- follow NPS policies and guidelines relating to publications
- work with your printing coordinator
- understand and follow the procedures suggested in this chapter

In accordance with the Government Printing and Binding Regulations (USC, Title 44, Section 501), the Government Printing Office (GPO) prints federally funded work. If you're using government funds to produce a paper (hard copy) publication, work with your regional printing coordinator.

2. What are the elements of a credit line and when must they appear?

NPS procedures require that researchers cite a NPS format credit line in all published captions, references, quotation citations, bibliographies, and footnotes that use NPS collections, regardless of format (Web, paper, sound recording, or moving images). Researchers and publishers must cite the following elements in a NPS format credit line:

- National Park Service
- park or center name

- object or collection title or description (for archives, also include box number and folder title or number)
- control number, such as a catalog or negative number (to help others order copies when they see the item reproduced in the publication)
- credit to the original creator of the item (the original artist, writer, photographer, or scientific collector)

For example, "Courtesy of National Park Service, Yellowstone National Park, Thomas Moran, "Sand in the Canyon," 1871, YELL 8542"

Note: For some visual artists, particularly fine artists and photographers, this credit line is required as part of copyright protection.

Use the Department of the Interior buffalo seal and NPS arrowhead logo on all printed material paid for with government funds. If you use more than one color in any printed publication, you need approval from the Washington Office printing officer. You may make your printed publications available for sale through GPO by submitting a GPO Form 3868, Notification of Intent to Publish. This form is available from your regional printing coordinator or the Washington Office printing officer.

3. How do I ensure the researcher gives the park publication copies?

When the researcher first registers, ask for at least two copies of any publication produced using park collections. Restate that request when the researcher requests copy photographs. Within 10 days of publication, ask the researcher to give copies to the park. Explain that the park maintains copies of works based on park collections, and lists those publications on the NPS Museum Management Program (MMP) Web site.

Place your request for publication copies of works produced using park collections on your park's researcher registration or duplication forms, so the researcher understands this from the minute of registration. You should request a small publications budget to buy works based on your park's collection.

You or the park librarian should send full bibliographic citations of the received publications to the Museum Management Program (MMP), National Center for Cultural Resources Stewardship and Partnership Programs, to have the publication listed on the Web site.

4. What is a park-specific rights and reproduction policy?

A park's rights and reproductions policy must cover the following issues:

- the purpose of giving researchers copies, usually to enhance access and use of collections under the fair use provisions of copyright laws (See MH-III, Chapter 2, Legal Issues.)
- procedures for obtaining copies and for payment

- the park's fee schedule for copies, including supplementary fees for rush orders and other special projects
- policies on when visitors may use their own equipment to make copies, and how requests are made and considered
- procedures for collecting, managing, and using fees collected
- definition of terms used in the policy, such as rush job, fair use, indemnification, and oversize
- procedures for requesting and obtaining publishing permissions, rights clearances, and licenses
- acknowledgment (crediting and captioning) procedures
- how and when park and NPS logos and names may be used
- pre-publication review procedures
- how to request reproductions or copying permission for loaned materials

See Figure 3.5 for a sample cooperative publishing agreement, Figures 3.6 and 3.7 for sample model release forms, and Figure 3.12 for a sample Memorandum of Agreement for a publication.

5. How do I prepare a parkspecific rights and reproduction policy?

Park rights and reproductions policies will vary considerably, depending on a park's circumstances, such as its ability to collect reproduction fees and the level of staffing to handle duplication or copy order work involved in reproductions.

Work with your cooperating association or have memoranda of agreement with private companies for large projects to recover costs involved in producing copies, captions, derivative works, and publications. These sources may be used to cover the staff salaries and user costs associated with a publication project.

To develop a rights and reproduction policy, work with a team of staff including:

- curators
- archivists
- registrars
- librarians
- discipline specialists

- budget officers
- contracting officers
- public affairs officers
- cooperating association staff
- NPS solicitors
- associated groups, as appropriate

Use this team to develop a working draft for review by the NPS solicitor and the superintendent. For more information see *MH-III*, Chapter 4, Reproductions (in prep.).

6. What duplication and copying procedures apply?

If the researcher wishes to have xerographic, photographic, microfilm, or digital copies produced of the park's museum objects, you should:

- follow the park-specific rights and reproductions policy (developed *before* materials are copied and given to the researcher)
- ensure researchers fill out the researcher registration form, the access and use policy statement, the researcher duplication form, and the copyright and privacy restriction statement *before* they obtain copies
- make certain that on the researcher forms or on the researcher's equivalent task directive statement, if the researcher is conducting a park-supported research project, the researcher has indicated precisely how the copied materials will be used (for example, one-time internal use of the image within chapter 6, page 56, of the second edition of the book as a full-page spread, sized 6" x 9" with caption)
- don't allow researchers to make their own copies because they may damage original materials or unknowingly infringe copyright or privacy or publicity restrictions
- ask researchers to identify items they wish to copy by writing an
 accurate description on the researcher duplication form; if the research
 is archival, the researcher should use an acid-free strip of paper (no
 post-it notes or sticky tabs) so it is clear where the item is located
- ensure the researcher knows he or she is responsible for securing any
 necessary third-party permissions, such as copyrights, privacy or
 publicity rights, consultations, etc., with traditionally associated groups
 for sensitive cultural materials; the NPS reserves the right to demand
 proof of receipt of such permissions before providing copies (See
 Section D on Cultural Issues for further guidance.)

• determine if the copy will be used in product development, such as reproducing a piece of furniture for sale, or developing a multimedia product with a significant portion (5%+) of NPS-provided content; if so, follow the guidance provided in that section of Chapter 4, Reproductions (in prep.)

If you have preservation or record copies (such as record photographs, digital files, xerographic copies, or reproductions) of your objects, provide these materials to the researcher instead of the original object.

7. What credentials must the user have to use the park's collections in a publication?

See MH-III, Chapter 1, Section H, User Qualifications.

O. Documentation

 How do I document objects used in a publication?

Note when materials have been published in the catalog record and accession folder. Place a photocopy of the title page of the publication and the page(s) that show the object in the accession folder, and if available, the catalog folder.

Consider creating a publications notebook(s), organized by catalog numbers in increasing numerical order, with tabs by year, to hold the pages and any notes or copies of the researcher registration form you wish to keep together to document collections usage. Use the citation screen in ANCS+ to record this information on particular works.

Ask researchers for copies of publications using park collections. Keep one copy in the museum archives and others in the park library.

2. What is an exclusive use agreement?

On occasion, publishers, authors, or multimedia distributors will request an exclusive use agreement. This agreement states that the park will not provide copies of the research materials to any other publisher, author, or multimedia distributor for publication, use, or distribution. The details of the contracts can vary significantly from publisher to publisher.

NPS staff may NOT sign exclusive use agreements for NPSproduced or owned archival and manuscript collections because most materials are available by law to all.

3. Should I agree to an exclusive use agreement?

No. The NPS collections are held in trust for the American people, not for just a single user. Agreements benefiting one organization or group at the expense of others are questionable at best. According to the NPS policy of equal access, any materials supplied to one publisher also must be supplied to any other requesting publisher. See *MH-III*, Chapter 1, Section C, Ethical Issues.

4. What is licensing?

Licensing is a written or contractual agreement allowing an organization or individual to use materials in a certain way or in a certain geographic area during a given period of time and after providing royalties. Licensing implies that something is being given to one group and denied from other groups. NPS may *not* grant exclusive or sole use of (i.e., license) our public collections to one group. The NPS has no authority to license products. Though the NPS can't license or authorize exclusive use, agreements are possible. See Figure 3.5 for a sample agreement.

5. Who can publish using NPS museum resources?

Anyone who follows the NPS policies and procedures for access, researcher registration, duplication, and the copyright and privacy statement and their related laws may publish NPS objects.

NPS provides equal access to all unrestricted materials, though such access is regulated by the park's specific policies on access and use and rights and reproduction policies. Access, use, and duplication may be limited to specific times because of limited park resources, particularly staffing.

Many publications relying on NPS collections for illustrations or research are written by non-NPS researchers and authors. Publishers of park resources might include park archeologists, curators, archivists, interpreters, research scientists, and cultural and natural resource managers. Users who publish might be reporters, researchers, scholars, students, or writers.

Another major community of users is made up of cooperating associations; park concessionaires; partners, such as museums; local school districts; universities; historical societies; and other organizations. The Parks as Classrooms program is one example of a cooperative venture. Cooperating associations are the foremost publishers of park-related materials. For a list of cooperating associations, write to:

Conference of National Park Cooperating Associations PO Box 640 Charles Town, WV 25414

The NPS doesn't limit the right to publish NPS museum objects to staff or to a few individuals. Anyone who follows NPS policies and procedures may publish using NPS collections.

P. General Information on Producing a Publication

1. What is the purpose of the publication?

Before beginning a publication, it is essential to identify the purpose of the publication:

- Who is the audience to be reached?
- What is the message to be conveyed?
- What is the publication's purpose?

- What publication format and media best reach the audience? See the chart in Question 4 for a summary of the advantages and disadvantages of:
 - paper publications (books, pamphlets, image portfolios, document packages, journals)
 - moving image publications (video and film)
 - multimedia publications (CD-ROMs and Internet sites such as the World Wide Web)
 - sound recording publications (CD-ROMs, cassette tapes, Web radio programs, and oral histories)
- Is the project realistic, considering:
 - the park's museum collections and its strengths and weaknesses?
 - the park staff and partner's publication skills in writing, editing, designing, layout, and their topical expertise?
 - park staff and partner's available time, budget, and other resources?
- 2. Who is involved in developing a publication?

Producing a publication involves various skills and talents that may be found in one or two people, or among internal and external staff, including partners, contractors, and publishing professionals.

The necessary skills for producing a publication include planning, researching, interviewing (may not be required), writing, editing, consulting with others, designing, and project managing. The needed skills vary depending on the type of publication.

For a CD-ROM or Web site, the emphasis is on writing, producing a storyboard, design and layout, and establishing the work flow (linkages). For moving images such as video, the emphasis is on producing a storyboard, identifying locations, preparing actors and locations for filming, editing, and obtaining permissions. For sound publications, the needed skills are for selecting a program and performers, hiring a performance locale or professional sound studio and crew, mixing elements, and marketing.

Internal participants might have any or all of the above skills. These include:

- discipline specialists such as park, center, or SO museum staff, archeologists, biologists, paleontologists, ethnographers, historians, archivists, librarians, and interpreters
- public affairs officers

- printing coordinators
- Support Office (SO) staff
- Harpers Ferry Center staff for exhibitions, publications, film, sound recordings, and videotapes
- Denver Service Center staff
- National Center staff

Regardless of the people involved, one person must be the responsible project manager who oversees the production from planning and proposal to marketing the final piece. This person must have a sound understanding of publishing and good managerial skills.

Any of the required skills can be contracted or obtained from a partner. External participants include NPS partners such as cooperating associations, the National Park Foundation staff, and local universities or schools.

If you work with a publishing house, such as a University Press or the GPO, you probably will be expected to submit a manuscript in electronic form. You may be asked to code the manuscript electronically, or to produce formatted electronic final pages (mechanicals). If you are working with a contracting sound or video publisher, you may be asked to develop a storyboard, script, or program.

The publisher may do some of the production for you, such as layout and design, editing, indexing, and marketing. The amount of work done by the publishing firm depends on the contract you negotiate with them.

3. How do I decide which media or format to use?

Before you select a publications format, identify your audience, message, and the purpose of your publication. Learn the advantages and disadvantages of the different publications formats as a tool to reach your specific audience.

Each medium or publications format reaches different audiences. A quick summary of these audiences, by format follows:

- *Paper publications* are used in every home, school, library, office, and organization around the country, although getting a publication to all of these venues can be expensive.
- Moving images reach people largely through television, although many schools and theaters also show moving images directly. Growth areas for moving images include CD-ROMs, videotape screenings on commercial aircraft flights, and public library circulation of videotapes and CD-ROMs.

Sold through catalogs and stores, video is marketed, played, and used for education worldwide in various formats, from Beta and VHS, to the PAL system (used in England). Digital Versatile Discs (DVDs), a new CD-ROM format, hold entire commercial motion pictures on one CD.

• Multimedia (Web and CD-ROM) reach more than 40 million individuals and institutions worldwide through the Internet and the World Wide Web. Individual CD-ROMs are marketed like books, although they can contain text, sound files, still and moving images, or software. Most computers being sold contain CD-ROM drives and an increasing number are reaching American schools.

The global market for CDs and quantities of freeware CDs is growing proportionally. See *COG* 19/19, Care of Archival Compact Discs for background information on CD technologies.

- **Sound recordings** reach most households, schools, libraries, offices, and organizations around the country. The most popular sound recording form is CD. The new Web Radio format and online sound files on the Web are making sound recordings more widely available than ever before.
- 4. What are the advantages and disadvantages of each publications format?

See the following chart.

Publication Formats Summary Chart		
Type of Media	Advantages	Disadvantages
Paper (Books, Pamphlets, Journals, Image Portfolios, Document Packages)	 Familiar and comfortable Portable and easily shipped via the post office, fax, or by other carriers such as UPS Easy to use, requires no special playback equipment Can last for 100+ years if prepared to preservation standards Is 16 times less expensive than magnetic or electronic media to store because it doesn't need refreshing, migration, software, and equipment maintenance Used widely in the home, schools, and public libraries Included in all information distribution systems for education, research (abstracting and indexing), and documentation (accessioning and cataloging) worldwide 	 Can be seen as old fashioned Expensive to distribute and bulky to carry Expensive to print, so fewer copies are made and reach fewer people initially If wood pulp, can deteriorate fast, reaching fewer people over time Cumbersome to update, as you must reprint it Not interactive Not a good learning medium for some students Not easily searched like electronic records
Moving Images	 Available internationally via the Web and television Popular Attractive to hearing and sight A widely used technology in schools, libraries, theaters, offices, homes and on airlines Saleable in shops and catalogs worldwide Effectively show action, time, and sequence Have freeze-frame and rewind, so individual learners can review something they missed or didn't understand. Used for self-paced learning for basic how-to skills 	 Are passive media that appeal to the senses of sight and sound Can be expensive to produce Easy to create a non-professional quality video; difficult and expensive to do a professional-quality product Videotape is short-lived and requires refreshing and migration (reformatting); film is longer-lived media but requires excellent cold storage and usage copies Requires equipment to play The newer technology isn't always compatible with older technology, for example, VHS equipment doesn't play old Beta or PAL formats

Publication Formats Summary Chart		
Type of Media	Advantages	Disadvantages
Multimedia (CD-ROM and Web)	 Popular internationally Interactive and user-driven Attractive to hearing, sight, and touch (virtual reality, the mouse); it can incorporate text, image, sound, and video files, and virtual reality experiences in real time Allows for simulated learning situations Effectively shows action, time, and sequence Relatively inexpensive to produce Easy and inexpensive to update and distribute Reaches millions of users internationally Engages users in self-paced learning with hypertext links, which allow users to explore peripheral areas of interest 	 Requires an excellent writer, editor, and graphic designer, and the multimedia abilities of a filmmaker, and specialized coding skills CD technologies are fragile, change rapidly, and often can't play earlier CD formats Modern Web access is not yet as universal as television Not eye legible, requires equipment to use that must be maintained Not all home systems can play sound, video, and image files No single Web style manual; no equivalent to the <i>Chicago Manual of Style</i>
Sound Recordings	 Can be used on the radio, television, and on the Web, reaching millions easily A very personalized, "real time" media that gives a sense of actually "being there" with a famous personality or performer Can reach people that the written word does not reach effectively Can be distributed as CD-ROMs cheaply and effectively 	 While Web radio is growing tremendously in popularity, not all home or office computer systems have speakers or sound cards to play sound files Requires equipment that must be maintained Technologies change quickly, and are not compatible with earlier formats

5. How do I determine publication specifications?

Before you write your publication specifications, decide whether the publication will be of permanent value to the NPS.

Permanently valuable publications might include:

- collections catalogs
- catalog raisonnes
- archival finding aids
- Internet (Web) features

• studies of park site elements (histories, archeological, natural resource and architectural studies)

Temporarily valuable publications might include:

- handouts of special events
- temporary leaflets
- special event posters of minor event

See the following chart for determining publication specifications.

How to Determine Appropriate Publication Specifications		
Type of Publication	If Permanent Select	If Temporary Select
Books	 Permanent and durable paper (lignin-free, high alphacellulose paper with a pH between 7.5-8) as listed in American National Standards Institute (ANSI) standard for permanence of paper for printed library materials, P39.48-1984 Carbon black or inorganic ink Sewn, not glued hardcover binding for durability Wide gutters (wide interior margins) so text isn't cropped if rebound 	 The least expensive paper allowed by NPS publications coordinator Any ink Any margins A glued soft-cover binding for lowest cost
Journals	Usually no choice as the publication material and format are determined by the editor and publisher; should be permanent and durable paper for special issues	The least expensive format; any paper or ink will do
Pamphlets	 Permanent and durable paper (lignin-free, high alphacellulose paper with a pH between 7.5-8) as listed in ANSI specification P39.48-1984 Sewn, not stapled Wide gutters (interior margins so text isn't cropped if rebound) Carbon black or inorganic ink, not produced on a daisy wheel printer, ink jet printer, or with a thermograph or mimeograph (If printed from a computer, use laser jet printer; if xerographically copied, make certain the toner has fused.) 	The least expensive format; any paper, ink, or format will do from hectograph, mimeograph, to daisy wheel printer on demand

How to Determine Appropriate Publication Specifications		
Type of Publication	If Permanent Select	If Temporary Select
 Permanent and durable paper folder or photographic paper (lignin-free, high alpha-cellulose paper with a pH between 7.5-8) as listed in ANSI specification P39.48-1984 Images processed according to ANSI standards if photographic Images tested for residual thiosulfate and density Sewn (if bound), not stapled Wide gutters (interior margins so images aren't cropped if rebound) Carbon black or inorganic ink if printed 		The least expensive format—any paper, ink, or binding, even short-lived color photography or xero- graphic processes
Document Portfolios	 Permanent and durable paper folder and document paper (lignin-free, high alpha-cellulose paper with a pH between 7.5-8) as listed in ANSI specification P39.48-1984 Sewn (if bound), not stapled Wide gutters (interior margins) so images aren't cropped if rebound Carbon black or inorganic inks or pigments (not dyes) if printed 	The least expensive format
 Moving Image- Motion Pictures Film processed to ANSI standards Film tested for residual thiosulfate, resolution density Film issued in archival film cans such as poly Archival quality tape leader and splices to presticking and tape ooze 		The least expensive format—probably videotape
Moving Image Videotape and Sound Recordings-Cassettes and Reel-to-Reel	 PET or Mylar tapes that are short-playing (less than 30 minutes); they are stronger Tapes with iron oxide pigments, not metal particulate or chromium dioxide pigments Reel-to-reel format for master copies; short-playing thick tape cassettes (not long-playing) for viewing copies An inert plastic (such as polyester) film reel container 	The least expensive format—probably long-playing videotape in a microcassette format

How to Determine Appropriate Publication Specifications		
Type of Publication	If Permanent Select	If Temporary Select
Moving Image Digital Versatile Disc (DVD) and Sound Recordings	A more tested media; no permanence data available yet for DVD and sound recordings	• DVD
Moving Image Laser Disc	 A disc that has a stable external layer (such as gold), stable pigments, and an inert plastic or etched glass substrate A scratch resistant disc 	The least expensive format
Multimedia- Diskettes	 Diskettes, but realize they are short-lived Reel-to-reel tapes, as your master; short-playing thick tape cartridges for usage and sales 	The least expensive format
Multimedia CD-ROMs and Sound record- ings-CD-ROMs	 A scratch-resistant disc with a gold layer, thalocyamine dye, and an inert plastic or etched glass substrate, <i>not</i> an aluminum reflective layer or substrate An Error Detection and Correction (EDAC) format disc Polystyrene jewel cases with an internal tray and hub to hold CD in place for distribution and storage An ink-printed paper label under the jewel case tray for reading through the clear jewel case cover, instead of printing directly on the CD 	The least expensive format

6. What are the basic steps in the publication process?

The basic steps necessary to all types of publications include:

- identifying your audience
- planning and developing your theme
- writing a publication proposal
- finding funding
- 7. How do I identify the audience?

Determine the purpose or function of your publication. Ask yourself why you want to produce this publication. For example, are you preparing something to:

- attract the attention of scholars to your collections?
- aid in park interpretation?

- be used in the school curricula by teachers? If so, at what level?
- interest the public in museum collections by showcasing them thematically in catalogs or exhibits?

Ask yourself how:

- the publication will serve the NPS's mission
- the publication will help the park
- the publication will serve your discipline/profession
- the publication features NPS museum collections
- the publication differs from others on the topic

What is the age group of the potential audience? The Library of Congress National Digital Library has published a report prepared by the Center for Children and Technology (available at cct@edc.org) called *Collection Evaluation Criteria*, which identifies key thinking skills for history, culture, English language, literature, science and technology, and social sciences, such as:

- comprehension
- analysis and comparison
- research
- interpretation
- · decision-making
- applying these skills to real-life examples

If you are planning to produce an educational publication, you might find it helpful to understand what level of skills your audience will have. For further information on this publication, look at the Library of Congress Web site at http://www.loc.gov to see how it handles these educational issues.

Another useful Web homepage is Federal Resources for Educational Excellence (FREE) located at http://www.ed.gov/free/. This site provides a compilation of excellent educational materials produced by federal agencies, including the NPS. It is searchable by subjects, such as "social sciences" or "arts."

As you develop a Web site or feature, plan to put it on the NPS server under your park, office, or center. There is very useful guidance and policy on creating NPS Web pages at http://www.nps.gov/helpdesk/. In order to make your Web site available to the widest audience, please inform the Cultural Resources Web team leader, National Center, Cultural Resources Stewardship and Partnership via cc:Mail at CR Web_Team. Appropriate links will be set up from the "Links to the Past" homepage at http://www.cr.nps.gov/, especially under "Tools for Teachers."

Some software packages have built-in language assessment features that determine the grade-level of your publication's vocabulary.

Know what geographic population you wish to reach. Some publication formats, such as television and the World Wide Web, are international, while others don't reach most homes. Use television to reach the most households in the United States and video or paper to reach the most schools.

Know your audience's disciplines and professions and the publications and research trends in which they are interested. Learn the demographics of the gender and other socioeconomic factors of your audience, as not all media reach all groups equally. For example, the Web reaches more men than women, although this is rapidly changing.

8. How do I plan and develop a theme?

The following steps, taken in sequence, should help you develop the purpose and scope of your theme.

- **Don't work in a vacuum.** Involve expert, discipline-specific professionals in all stages of the project from researching, writing, and editing, to peer review. This group becomes the project team.
- Develop expertise. Read widely on the topic area so you know the current standards of scholarship. Ensure your project team has no gaps in expertise.
- *Establish project evaluation criteria*. Have the team establish criteria for evaluating the publication before they begin work.
- *Identify traditionally associated groups concerned about this topic*. Identify the issues of concern, then produce a bulleted list of the major questions to be answered in the publication. Avoid stereotypes and assumptions. See *MH-III*, Chapter 1, Section D, Cultural Issues.
- Avoid conflicts of interest in your participants. Avoid asking an
 employee of a major corporation to serve on your project team if the
 publication will compete with the employee's corporate products.
- Determine the project depth or level of investigation. As described in the Cultural Resource Management Guideline (formerly NPS 28), Chapter 2, Research:

- an exhaustive project might include exhausting all original documentary sources, making physical comparisons with similar objects, and sampling and testing fabric for identification, dating, and circumstantial evidence
- a thorough project is more selective, using readily available documentation and includes a comparison of similar objects
- a limited project checks easily located, relevant documentation and compares a few similar objects
- Focus your topic. Don't try to cover too much. Use time and geography to limit your topic. Writing a publication on the Civil War may be too immense for your park. Try writing on a Civil War action in a particular area during a particular time. Focusing your topic gives you an achievable goal. Unfocused publications tend never to be completed.

The most common mistake of first-time publishers and writers is to pick a topic that is too large or unfocused.

- **Be comprehensive.** Once you have focused your topic, answer the questions who, what, where, why, when, and how about it. Write a paragraph or two summarizing the publication. Cover your topic systematically without leaving any major gaps.
- Ensure the topic works when applied to museum collections. Is the topic applicable to the materials you wish to include? Does the topic work as an examination of material culture? If not, rewrite the message.
- *Get a peer review.* Send the summary paragraph, issues list, and criteria to a peer review panel that includes related discipline specialists. Identify the issues of concern to all traditionally associated groups.
- Incorporate the review comments. Then revise and update the summary paragraph, issues list, outline, and criteria for evaluation, as necessary.
- Produce an outline for the publication. Break the outline into chapters or sections and detail the content of each chapter or section. Send the outline for another peer review that includes discipline specialists.
- Meet with the project team. Determine who will write the sample publication section (such as a book chapter); finalize the outline, timeline, and budget; and develop the book specifications.

9. What do I include in writing a formal publication proposal?

You should prepare:

- a summary paragraph overview of the publication
- a purpose statement
- a description of the publication's audience and the publication's benefits to that audience
- an outline of the publication including the major questions you will be investigating or covering and:
 - a table of contents
 - a brief description of each chapter or primary section of a Web site
 - the name and curriculum vitae of the author(s) and editor(s)
 - lists of the elements to be found in the front matter (such as table of contents, acknowledgments, frontispieces, etc.)
 - lists of elements to be found in the back matter (such as indices, bibliographies, footnotes, illustrations)
- specifications including:
 - publication content
 - size in characters, pages, and publication format size
 - format and type (for example, book specifications might include the number and type of illustrations, whether cloth or paperback, size of printing edition in number of copies, front- and back-matter details, and the proposed retail price)
- a timetable with the names of all parties responsible for each section
- *Management Policy* requirements for research (cited in Chapter 5:3, December 1988):
 - the relationship of the research to the management objectives
 - the project's theoretical orientation and methodology
 - how data will be recorded
 - how confidentiality will be preserved
 - how the results will be disseminated
 - how the resulting research documentation will be preserved

- how the publication and research documentation will be made available in the future
- a list of participants, partners, and supporters and their resumes
- a budget (consider getting an estimate from the GPO)
- a sample section, such as a chapter or essay, to evaluate the quality of the research and writing, required by some publishers

10. Where do I find funding?

Various funding sources, both internal and external, are available for NPS publications, including:

- park cooperating associations, which can apply for and receive federal funding for publication projects for the park
- National Park Foundation
- National Center for Technology and Training publications grants
- university presses, which might publish NPS manuscripts at no charge if they can profit (See the bibliography for source lists of publishers.)
- professional or popular periodicals or existing scheduled NPS publications, such as *CRM*
- foundations (See Figure 3.13 for a list of foundations that fund such publications and the bibliography for a list of appropriate source books on foundations.)

Note: You may use commercial and university presses only when working with a cooperator. Generally speaking, you must publish federally produced work through GPO.

11. How do I find partnerships and why is it desirable to have them?

If you are raising outside funds, consider your cooperating association, the National Park Foundation, and collaborative partnerships with private publishers, such as university presses or professional organizations. Evaluate local and regional universities, foundations, and publishing houses that have a history of publishing on the topic you wish to document.

- To find a suitable publisher:
 - Ask a discipline specialist for a list of the best presses publishing this topic.

- Call the reference desk at your closest university library and ask to speak to the expert bibliographer on your topic. Ask this bibliographer what presses are best regarded on your topic.
 Request help in identifying other regional publication resources in your discipline, such as writers, editors, and indexers; organizations; contractors; publications training programs; and publications manuals and handbooks.
- Go to the volumes *Publishers*, *Distributors*, and *Wholesalers of the U.S.* and *Books in Print* (see bibliography) at your local library, and look under your topic and in your region for names and addresses of appropriate publishers.
- *To find possible partners* to help you in the planning and development of your publication, consider approaching the following sources of help:
 - Contact your SO curator and other SO disciplinary specialists, park archivist and librarian, ParkNet cluster and park coordinators, and Cultural Resources Web Team leader, National Center staff and the NPS Web master. They can provide ideas and guidance for your publication project.
 - Look up the volume *The World of Learning* (see bibliography) in your local library. Identify the various academies, learned societies, research institutes, libraries and archives, and universities and colleges in your state and region. Consider and explore forming partnerships with these groups. Ask your local bibliographer to help you determine if they have a publishing record. If so, look at the reviews of their work, then contact these organizations.
 - Contact your local or state university publications program (in the English department, generally) or multimedia communi-cations department, which provide guidance, interns, and editorial expertise. The university's press might provide guidance, editorial expertise, and actually publish the work for you.
 - Talk to your local or state university computer science department (for CD and Web publications), which can help with hypertext mark-up language (html) coding, Web access, layout, and technical issues.
 - Contact your local newspaper, which might help you find suitable participants.
 - Contact local professional organizations, which can help you find good contract writers and editors. Check published sources such as *Encyclopedia of Associations* and *Instant Information* at your local library.

All partners should be informed early in production, that official publications must be reviewed to ensure that any NPS policy position described in the publication is accurate.

12. Why would I consider a partnership?

Partnerships have distinct advantages and disadvantages. See the following chart.

Advantages and Disadvantages of Publishing Partnerships	
Advantages	Disadvantages
The partner may have expertise in writing, editing, indexing, publishing, marketing, or topical areas the NPS staff lack. This expertise is essential to getting the publication done.	The partner may wish to control how the project is planned, written, and produced, ignoring NPS goals.
The partner may have resources for publishing, such as equipment, funding, or facilities that NPS lacks. This expertise may be essential to getting the publication done.	The project may be reshaped to fit the partner's schedule and budget, altering the NPS publication deadline, or the desired publication specifications.
The partner's resources may allow the NPS publication to have an increased press run (a larger publication edition) and a lower unit cost.	The partner may imperil the partnership by requesting all copyrights to the work or exclusive licensing. The partner must be warned that work produced by NPS employees during work hours can't be copyrighted (although the rest of the publication can be) and that NPS doesn't provide exclusive license to anyone. These negotiations may slow production.
The partner's resources may allow the NPS publication to have higher quality specifications, such as more illustrations, full-color illustrations, an illustrated cover, cloth binding, larger type, a contract Web designer, and a more long-lived format. While NPS staff may NOT accept personal payment for publishing material produced during work hours, some NPS parks have had private publishers send author's payments to the park's cooperating association as a donation to use for museum publications. Parks can also negotiate for a number of copies for NPS use.	The partner may request all royalties generated by the partnership. This is a point of negotiation.

Advantages and Disadvantages of Publishing Partnerships	
Advantages	Disadvantages
The partner's resources may allow the publication to be better marketed and distributed, thus enhancing the visibility of the museum collections.	The partner may request special mention or credit within the volume that is not extended equally to NPS. This is a point of negotiation. NPS should have a credit, such as co-authorship, or a listing in credit lines, for work done for publications. All photographs must be credited appropriately.

13. What should I do to prepare a publication?

- **Prepare a schedule** so you can plan and manage the work effectively at all stages of publication. Schedules simplify life by telling you who is responsible for what piece of a publication and when.
- Use a style manual. It explains how to keep a publication's elements, from captions to text, logically consistent and parallel throughout. NPS park staff should use the Chicago Manual of Style, which explains how to manage all aspects of paper publication, from writing to editing. Occasionally you may need style manuals for special publication formats, such as, Wired Style: Principles of English Usage in the Digital Age, or style manuals for special topics, such as Science and Technical Writing: A Manual of Style (see bibliography). Many groups issue specialized style manuals, such as the Council of Biology Editors, for specialized issues. The Museum Management Program (MMP) has developed an in-house style manual for the Plain English format used in this and other volumes of the Museum Handbook. Plain English is particularly effective for administrative reports, multimedia publications, and pamphlets and similar informal publications. Contact the Program Assistant, Museum Management Program, National Center for Cultural Resources Stewardship and Partnerships Programs, for a copy.
- **Begin to research using the steps noted below** once you have a rough research proposal and a list of questions to answer as described above.
 - Conduct a thorough computer search on your topics on various search engines on the World Wide Web.

Use boolean qualifiers (and, or, but not) to produce a clear search (for example: **dogs** and **cats**, but not **pumas**). Explore the topic thoroughly by using synonyms. Print, read, and file the results. Make any necessary changes to your research proposal and questions list.

Check Internet-based bibliographic databases and look for publication citations on your topic, which you can request on interlibrary loan through the Department of Interior Library or your local library. You might try the Library of Congress Marvel System at http://www.loc.gov>.

Be cautious when using the Web for research. Select your information only from credible sources that are frequently updated, and which post their criteria for inclusion. Such sites often provide lists of authors and their credentials. Sites of universities, federal agencies, and professional organizations are likely sources. Avoid using personal homepages, fans' pages, or enthusiasts' pages as source material, as they may contain misinformation.

Go to a university library after your basic Web research. Set up an appointment with the bibliographer and give the bibliographer a copy of your outline and explain what you are researching. Ask for help in identifying the best and most appropriate secondary and tertiary sources on your topics.

For example, the following may be helpful sources for monographs, journal articles, and textbook indexing and abstracting services.

In the Arts:

Art Index Bibliography History of Art

In the Humanities and Social Sciences:

America: History and Life
Anthropology Abstracts
Historical Abstracts
Public Affairs Information Bulletin
Humanities Index
Social Sciences Index
Social Sciences and Humanities Citation Index

In General Studies:

Dissertation Abstracts (now on CD-ROM)
Monthly Catalog of U.S. Government Publications
Readers Guide to Periodical Literature

In Natural Sciences:

Biological Abstracts Science Citation Index Wildlife Abstracts

Ask for similar resources for databases and unpublished sources, such as archival and manuscript collections.

Answer the questions you developed using the sources you've located. Flesh out your outline with notes on the topics covered.
 As you research, take good notes so you don't inadvertently plagiarize or infringe on copyright. Capture complete citations for all sources used.

- Determine which published sources are considered most valuable. Consult the citation indices listed above, look at book reviews (ask your bibliographer to help locate them), or ask for the advice of the bibliographer or a discipline specialist. As with Web sites, more current publications by major university presses have an advantage over obscure or self-published works. Reviews and the bibliographer can help you evaluate sources.
- Answer your research questions. Keep an alphabetical list of topics to be researched. This list might look like Figure 3.3,
 Sample Research Sheet. Answer your questions and record the bibliographic citation of your sources. Check and locate missing information. Have peers review it. Ensure your research is complete, accurate, and devoid of stereotypes and preconceptions. Accurately cite your sources.
- Go to the museum collections after your basic research is completed. You or the author will need staff time and assistance to locate and pull objects and arrange for photography or photocopying.
- Travel to see other museum collections, and consult sources at libraries, archives, and universities to complete research. Funding for such work should be included when planning the project budget. Use the National Union Catalog of Manuscript Collections available via the Research Library Information Network (RLIN) at many university libraries, or via the Library of Congress Web site at: http://www.loc.gov, to locate appropriate archival source materials. Refer to MH-II, Appendix D, Museum Archives and Manuscript Collections, for an overview of how archival research is conducted.
- 14. When do I begin writing text?
- Complete your note taking and research, then develop a revised outline in question form (see the Table of Contents for an example) before you begin drafting text. If you write the text before you have completed your research, you may have significant rewriting to do later.
- **Decide what writing style you will follow.** Most curators and archivists are taught standard academic writing style in school. This style, as illustrated in the *Chicago Manual of Style*, is perfect for scholarly publications, such as exhibition or collection catalogs. Administrative, educational and popular publications benefit from the more lively and direct tone and style described below, and referred to throughout the *Museum Handbook* series as Plain English.
- *Think about your audience*. As you begin writing, review your research. Arrange your research outline in order of importance to your audience. Group the questions on the outline using the questions as headers. Start each section with a summary of the section's contents.
- 15. What does a writer do?

As you write, follow the sequential activities described below:

Writers' Dos and Don'ts List		
To write well, do	Don't	
Develop an outline consisting of a structured list of questions to be answered. Work from this outline using plain English writing (active voice, concrete examples) rather than indirect bureaucratic language. Write your first draft, working directly from the outline. If you run into problems, rewrite the outline and start over.	Don't forget to give your outline a peer review to confirm the necessary issues are covered, and the order is rational. Don't fuss about details as you write the first draft. Get the basic text down, then fix it. Don't worry if you have to rewrite your outline once you start writing.	
Begin your writing by placing one of the following sections first: most important section most general section Or if one section will be more useful to your audience than all others, consider beginning with the most frequently used sections.	Don't automatically organize your writing by chronology or discipline, think of what your reader will want to know first. Instead, try to provide the most useful information first.	
Start each section with a summary that is short, lively, and direct.	Don't make your summary long, rambling, and chatty.	
Use ordinary English, for example: meet not attain begin not commence boundaries not parameters often not frequently finish or complete not finalize	Don't use complex, discipline-specific, or technical terms unless essential. Define all technical language in the text. Don't use bureaucratic, indirect, affected, or gentrified language (such as parameter, input, approximately, consequently, currently, compile, consists, discontinue, or specificity).	
Use the active voice and action verbs. Speak directly to the reader wherever possible, for example, "Write using lively language."	Don't automatically use the academic, passive voice and avoid all forms of the intransitive verb of being. Don't use nouns or adjectives as verbs (such as to target, to optimize, to keyboard, to archive, to interface, or to finalize).	
Use bulleted lists for strings of parallel terms, such as: deer elk moose caribou	Don't drown your reader in a swamp of words. Don't add items that aren't parallel to your list. If your list includes deer, elk, and moose, keep it parallel.	
Spice up your text by using: bold for emphasis headers in mixed case varied punctuation (,;?!) varied paragraph and sentence lengths varied sentence structure	• Don't produce cookie-cutter text. Don't automatically structure all your sentences as a noun followed by a verb followed by an adverb. Avoid excessive use of prepositional phrases (of the, by the, around the, and so forth).	

Writers' Dos and Don'ts List		
To write well, do	Don't	
Use lively headers throughout your text to signal changes in topics, and to keep the reader's attention. Follow your header with a summary, your major points, and supporting details, in that order. List examples in order of diminishing importance.	Don't write long blocks of undifferentiated text as it discourages readers.	
Write concretely, using specific examples, such as, "The twelve-year-old girl wove six cotton coverlets in 1876, five of which are in our museum collection."	Don't use overly broad or abstract examples, such as "the girl wove cloth."	
After the first draft, have a discipline-specialist editor to do a substantive edit. The editor will identify and fix the logical and structural problems, streamline the writing, identify where fact checking is necessary, and correct any errors and questionable assumptions.	Don't circulate your text for a wide peer review <i>until</i> you have completed this substantive edit or you will waste the panel's time.	
Following all necessary follow-up research and rewriting after the substantive edit, edit for style, grammar, punctuation, and format (footnotes, bibliography, and other special components).	Don't assume you can effectively edit your own writing. Find a subject specialist editor. After this second edit, obtain a peer review of the piece.	
Check to ensure you have completed all phases of the edit. Have an editor fix any stylistic errors according to your style manual.	Don't forget to instruct the editor as to what he or she is to watch for in the text. This includes spelling, punctuation, compounding, abbrevia-tions, italics, headers and footers, active voice, unclear antecedents, bibliographies, variant numeration (1, one, or I), and acronyms.	
Have an outside peer review team read the piece for content. Fix any problems. Be sure to give your reviewers advance notice of what they are to review and how much time is needed.	Don't skip the peer review. It is an essential part of publication.	

16. What are the steps in selecting content?

When you are selecting content, such as illustrations, sound recordings, or videotape, for a publication, you should be concerned about the following:

- *legal restrictions* (See *MH-III*, Chapter 2, Legal Issues.)
- *cultural sensitivities* (See *MH-III*, Chapter 1, Section D, Cultural Issues.)
- audience's comprehension level, interests, and ability to use what you are selecting (See Question 7, "How do I identify the audience?")

- whether the collection is widely available and extensively used elsewhere.
- the appropriateness of the collection to the topic

Talk to discipline specialists if you are uncertain whether the collection is pertinent to the topic, and consider the following criteria:

informational value: Is it a clear and useful example? The content under consideration should document:

who (people, groups, corporations, and animals)

what (objects, plants, structures, activities, and events illustrated)

where (places)

why (circumstances of creation or documentation)

when (date, era, or period)

how (underlying reasons or causes, materials, techniques, and processes being covered)

- artifactual value: Is it a fine example of a particular process or format?
- associational value: Does it relate to a major figure, culture, event, or place, such as the Booth derringer used to kill Lincoln?
- evidential value: Is it historical, legal, or scientific proof of an activity or event, such as land records, or a type specimen that was labeled completely and photographed at the time of capture?
- administrative value: Does it provide a baseline of park resources, such as resource management records, maps of back country land,
 GIS data on park resources or a herbarium that includes all plant species found in the park in 1900?
- monetary value in the marketplace: Are the selected collections viewed by the public as treasures, such as the silver collection at Morristown National Historical Park, Peale paintings at Independence National Historical Park, or Ansel Adams photographs at Yosemite National Park?

17. How do I obtain licenses and permissions?

If you are researching or preparing your own publication, you are responsible for obtaining permissions (licenses) to use any materials you quote, reproduce, or otherwise use in the text you publish. All other researchers using the park collections must obtain all rights and permissions themselves. You do not have to obtain the rights or permissions for a researcher.

To obtain permissions, write to the creator of the work (author, photographer, editor, or publisher) and obtain written permission to use the materials. You may be asked to pay a fee.

In your letter of request, you should clearly identify:

- the title of the work
- the location where you found the work (full bibliographic citation, if possible)
- the nature of the publication in which you wish to use the work, for example, as an interior full-page illustration in a commercial, for profit book's first edition
- the type of usage you want approved, such as nonexclusive international publication rights in all languages, and for all editions, for all media, including the Internet

To protect your park from a potential lawsuit, you must be able to show you made a good-faith effort to obtain a license or permission. This effort should include:

- identifying the work's creator
- attempting to locate and contact the creator for a permission
- searching the U.S. Copyright Office records for any copyright on the materials (Write to the U.S. Copyright Office at the Library of Congress, or use the Library of Congress Copyright Office Web Page at http://lcweb.loc.gov/copyright/. Once on the page, select the Copyright Office Records-How to Conduct a Search.)

Publishers' addresses can be obtained from *Books In Print*, available in most public libraries. You also must obtain permissions required under state and federal privacy and publicity laws. See *MH-III*, Chapter 2, Legal Issues, for details. See Figure 3.2 for a sample Intellectual Property Permission Request.

Obtaining permission may take weeks. Allow ample time in your publication schedule to do this. With any luck, your creator or publisher will sign your letter of request and return it. Without permission, don't publish the item.

18. What do I need to know about writing captions?

Captions are the context you provide for an image. A good caption enhances the value of the image. A poor one leaves readers wondering why the image was selected and reproduced and leaves the image subject to misinterpretation. Captions tend to be terse, often incomplete, sentences.

A good caption includes the following elements:

- item title in quotes, followed by (or)
- object name or collection title
- brief description (including material and measurements)
- dates(s)
- plate, page, or image number in the text
- name of the object creator
- photographer, if appropriate
- park name
- catalog number
- negative number, if appropriate

For example:

Western Mono Cooking Basket ca. 1910-1920 Collected by Ansel F. Hall at the 1921 Indian Field Days Sedge root, bracken fern root, bunchgrass. H 6 1/2", Dia. 14" Yosemite National Park, YOSE133 Gift of Mrs. William Moyle DuVal

Plate 97, Keystone View Company, "Yellowstone National Park" shows an appreciative crowd of Hardy Hotel waitresses in full costume gathered around Old Faithful ca. 1918. Wapantucket Collection, YELL 123, Negative # 98977

19. When do I begin review and final fact-checking?

You should fact-check throughout your project. The easiest way to do this is to produce a research sheet. A research sheet is an alphabetical list of facts that need to be checked, such as spellings, dates, how events happened, and so forth. Your research sheet will grow to enormous proportions if you do your job right. A research sheet list of entries might look like Figure 3.3, Sample Research Sheet.

Before you give your piece to the editor, go to the library and check all the missing information on the research sheet. After reading the text, the editor will ask additional questions that will become part of your research sheet for later fact-checking. Your research sheet should be completed, all research sheet answers found, and all research incorporated into the text before it goes out for peer review.

20. What do I need to know about editing?

You can't overstate the importance of a good editor to any publication project. A professional editor can significantly improve your manuscript. Self-editing rarely catches most problems. You know what you were trying to say and are not in an objective position to judge if you did so effectively. Work with a discipline-specialist editor to create the finest possible product. Tell the editor who your audience is and the publication's purpose, specifications, and deadline.

Editing occurs in several stages:

- Substantive Edit is the first edit a piece receives by a subject specialist editor (not the writers). The substantive editor focuses on the logic, structure, completeness, flow, and organization of the piece and may reformat and correct word usage. A substantive editor points out or fixes:
 - structural flaws in the work's organization
 - errors in logic and poor reasoning
 - weaknesses in theoretical presentations or research methodology
 - inaccuracies and errors
 - incompleteness, missing sections, and gaps in the theme
 - poor flow of sections and ideas
 - awkward writing
 - unnecessary repetition
 - poor word usage or ineffective writing

See the Museum Management Program Editing Checklist, Figure 3.9 for a full list of substantive editing tasks. A good substantive editor also may point out everything a copyeditor identifies (see below). Substantive editing is slow and time-consuming. A substantive editor may get through no more than 5-10 pages in a day if the manuscript is poor.

 Copyedit is the second major edit a piece receives by someone other than the writers. In general, the errors described under the substantive edit (above) should already have been corrected. The copy or stylistic editor focuses on and fixes:

- excessive wordiness
- improper tone or voice
- spelling and grammar errors
- punctuation errors
- incorrect word compounding
- excessive use of abbreviations, acronyms, and jargon
- improper use of italics, bold, and underlining
- nonparallel or incorrect headers and footers
- excessive use of passive voice
- unclear antecedents
- inconsistent bibliographic and numeric style
- noun and verb disagreements

Copyediting is the fastest way to improve a manuscript. A copyeditor focusing on simple errors in grammar, punctuation, and spelling can edit at 5-15 minutes a page, depending upon the state of the manu-script and the level of improvement desired. Simple grammar, punctuation, and spelling are the easiest to correct. If the editor is to improve sentences and correct word usage, the work will take longer. See the Museum Management Program Editing Checklist, Figure 3.9, for a list of copyediting tasks.

21. What do I need to know about design and layout?

Layout must enhance, not obstruct the usefulness of your publication. Design reinforces the text, providing a clear visual guide to its structure. Good layout attracts attention without overwhelming the message. An effective layout makes the message easier to read. Any element that obstructs the text or makes the reader's eye jump around the page is a hazard and should be changed.

Four basic principles to consider when planning the layout of a book, article, pamphlet, CD-ROM, or Web page are:

• Contrast: Just as in writing, varying sentence structure and length and paragraph length is important. Strive for varied type levels, colors, sizes, lines, thicknesses, shapes, spaces, and other elements to make pages more interesting. Contrast the differences between unequal items. Contrast effectively organizes text, indicating when text is different or new. When using contrast, avoid using elements that are just slightly different or your contrast will vanish. To be effective, contrast must be carefully controlled and balanced.

The most common design mistake made by amateur designers is overdoing contrast with too many different type sizes, styles, column widths, shapes, and spaces.

- Consistency: Develop a consistent design strategy for your piece using repeating elements as road signs for the reader to find the same parts of the text on each page. Give your piece a unified identity by using repeating colors, textures, spatial relationships, shapes, bullets, numbered lists, typefaces, headers and footers, rules (lines), and bolded text. Repeating design elements clarify the relationships among the parts of the text for the reader, allowing readers to focus on what is being said.
- Relationships: Place related items in a cohesive grouping. Don't group
 unlike materials or place materials equally distant all over the page.
 Grouping by relationship streamlines your design and eliminates clutter,
 giving your work a cleaner appearance.
- Composition: Place items on a page in a visual relationship so they appear balanced. Use your white space effectively. Feel free to be asymmetrical. Think of a page as a composition. Rather than continually centering text, try right or left alignments for a more sophisticated look. Don't place too many elements on a page. Don't stick design elements in corners.

Take a look at the NPS ParkNet and "Links to the Past" to see effectively designed Web publications.

22. How do I work with a professional designer?

If a professional designer is working on your publication, you can assist the designer by providing certain information when the book is planned, such as:

- the anticipated audience
- the message
- the schedule

- publication specifications, such as format; size; quantity of illustrations, charts, graphs, tables, or other special media; quantity, type, and placement of publication elements, such as front matter (prefaces, tables of contents, and acknowledgments), back matter (such as indices, bibliography and footnotes), or a credit page on a Web site
- format and media (a particular paper, CD-ROM, or Web format)

The designer will:

- produce the cover, packaging, or visual component
- develop an overall concept for the publication
- select all typefaces
- place all illustrations
- determine color usage
- set all text into units
- determine how the publication's elements will work together

If you or your team must design the publication, you will need training, a partner, or a contractor. Consider asking your local newspaper staff for help, or take classes at your local university.

23. Should I produce a camera-ready copy or an electronic manuscript?

If you have a choice, produce an electronic manuscript (using a word processing software that can be saved to a hypertext mark-up language ("html") format) to be designed and laid out by a trained designer. Your publication will be enhanced greatly by the work of a professional designer.

If you must do the design yourself, try to find partners in publications departments, local newspapers, or call the Volunteer in the Parks Program to locate volunteers with design skills.

24. How do I obtain illustrations for my publication?

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Once you've determined what kind and number of images you want, select the appropriate format you want to use. Some of the options are color prints, black-and-white prints, slides, or transparencies in various sizes from 35mm to 8" x 10".

Obtain illustrations during research while you are working in museum or archival collections. Use the Sample Intellectual Property Permissions Form, Figure 3.2, to obtain permissions. If you must acquire images from outside sources, follow their procedures and obtain permission to publish them from the appropriate source. This may be costly and time consuming. Determine the number and quality of record or publication photographs of the objects you wish to publish. If high-quality reproductions of these objects are desired, you may need to have them made. Complete the park's Researcher Duplication Form (see *MH-II*, Appendix D, Museum Archives and Manuscript Collections, Figure D.16) indicating the type, quality, format, and size of image desired. Work with a photographer, and as part of the contract, arrange a visit, handle the object, supervise any on-site work, and instruct how off-site handling and duplication should be done. You may have to pay a cost-recovery fee for the photographs.

To save time, capture the appropriate caption and credit line information when you request the photograph. See *MH-II*, Appendix R, Curatorial Care of Photographic Collections, and *MH-III*, Chapter 2, Legal Issues, for guidance on copyright, privacy, and other related intellectual property issues.

Q. Producing Paper Media

 What do I need to know to select the best kind of paper publication for my purpose?

You should be aware of the advantages and disadvantages of the various types of paper publications. See the chart below:

Advantages and Disadvantages of Paper Publications		
Format	Advantages	Disadvantages

	Advantages and Disadvantages of Paper Publications		
Format	Advantages	Disadvantages	
Brochures (includes pamphlets and fliers)	 Inexpensive to produce and distribute Easy to file Potentially attractive to all ages Can incorporate images and text Can be placed in windows and on walls 	 Easy to lose Often thrown out, not cataloged and maintained Can be useless if not well-written and designed Allow relatively little space for text and images Usually intended for relatively short number of years 	
Journals	 Many are eager for content, so you may get published easily Easy to submit materials Are maintained by libraries for use later Can reach many thousands of people Can incorporate images and text Are well indexed by a variety of reference works 	 Quality can be very uneven Usually printed on poor paper, meaning a relatively short lifetime, thus fewer people have the opportunity to read it Quality of image reproduction can be poor 	
Monograph (Book)	 If the press has a good name, can enhance the reputation of the publication Allows a greater scope for investigation than articles or pamphlets If the paper is high quality, will be maintained in libraries for many years (>100) Can incorporate images and text 	 Frequently published in very small editions, making the cost-per-volume high Color images often kept to a minimum, in a single section, or require a financial subsidy because they increase cost Easy to produce a mediocre volume 	
Catalogs	 Can effectively showcase collections, exhibitions, the work of an artist, and staff scholarship Can be organized by topic, geography, creator, period, style, format, medium, or many other subjects, allowing the authors maximum flexibility Often accompany an exhibition, thus providing additional benefits since viewers can actually see the originals and then learn about their context 	With full-color, high-quality images have become extremely expensive in the last two decades Require extensive reproductions, permissions, and high usage fees for images	

2. How do I plan and develop a brochure?

Follow the same steps that you follow when producing a book. See Section E, Producing a Publication Using Museum Collections, above. Follow the steps outlined in Figure 3.1, Master Checklist for Publication Project (Sample).

Resources you will need

Pamphlets and brochures can be done inexpensively on xerographic copy machines, requiring only researchers, writers, editors, designers, technical layout staff, and photocopying supplies.

Brochures can be done professionally by a contract writer and a professional design firm, who prints them in color on coated paper stock. For professional publications, you must budget for contractors, supplies, permissions (usually very few), printing, last minute textual changes, and shipping costs. The costs can vary depending upon the quality and quantity desired.

• The two types of brochures

The Harpers Ferry Center (HFC) of the NPS uses two standard types of brochures:

Site Bulletins: These are park-produced, supplementary
publications for urgent or intermittent needs. The bulletins include
standard formats, Unigrid-based layouts, computer (or occasionally
typewriter) composition, and are reproduced by office xerographic
copier (or occasionally a printer).

Content can be topical and include changeable information such as temporary park folders, trail guides, schedules, and other information essential to park operations. For specifications for this pamphlet type, contact HFC's Publications Officer and request the Site Bulletins Supplementary Graphics System pamphlet.

NPS Site Folders: These pamphlets are in the Unigrid standardized graphic and production design format developed for NPS. Production follows a broadside approach on folded size, one printing paper in two sizes, and 10 basic formats. The system's pivotal component is a grid of horizontal and vertical lines creating small rectangles over the 10 basic formats. This grid provides a structure for the layouts. For more information on Unigrid, contact HFC's Publications Officer and request the Unigrid design specifications pamphlet.

• Selecting an appropriate type of brochure

Use the supplementary graphics systems format for site bulletins, including supplementary documentation on museum collections, exhibitions, and similar matters. Use the Unigrid system of design for all pamphlets.

• The steps for producing a brochure

The steps mirror those in Figure 3.11, Digital Publication Project Checklist. Pamphlets are less elaborate than books and require fewer participants, less production time, and less funding. They also have fewer design options, since the Unigrid system dictates the layout. Brochures can be produced effectively in-house.

3. How do I plan and develop a journal article or an entire journal issue?

Contact the journal editor and find out the submission guidelines, schedule, organizing issue themes, and the need for unsolicited pieces for the coming year or two. Consider journals with a history of pieces on material culture, history, art history, or discipline areas that mirror NPS museum collections such as anthropology, archeology, archives, natural resources, and similar topics.

• Determine the format for your submission

Most periodicals have submission guidelines, which you can obtain from the editor. These guidelines explain in detail how to submit articles and special issues. They also explain submission format, including bibliography, required writing style, and publication scheduling.

Some journals post a scheduled list of special theme issues for which they are soliciting articles. Frequently these listings can be found in the journal or on the publication's Web site. If you are interested in submitting materials on any of these themes, notify the journal of the topic of the article you would like to submit.

• Provide the editor with the following

By publication deadline, you should submit the completed peer-reviewed article with any supplementary material, such as bibliographies, footnotes, biographies, or acknowledgments, in the format and style described in the submission guidelines. Many journals conduct their own peer review of a submitted article. Generally, the editor will tell you the desired publication format and what you need to submit.

• Other work you must do

Once the journal editor reads your piece, you are usually asked to review the page proofs (sometimes called galleys). These pages may be printouts or printed text and headings set for the full width of the page. During proofing, you should look for lost text, missing headers and footers, word breaks, and all the other items marked on Figure 3.10, Proofreader's Checklist for Reviewing Page Proofs, Mechanicals, and Bluelines.

Errors found on proofs must be marked as described in the *Chicago Manual of Style (most recent edition)*, or in Figure 3.10. During this final stage of publication, you should have completed all of the earlier tasks described above.

• What you will receive from the editor

You should receive a number of author's copies of the publication for use by the park as stipulated in the contract, at least one copy of which belongs in the park archives and one in the park library

You can't accept money for a work created during your normal scope of work as a NPS employee. Speak to your park Ethics Officer to see if any money can be accepted by the park cooperating association for the park's use.

You must never personally accept a check or other payment for work completed on NPS time.

• The steps in producing a journal article

The steps are similar to those for all other publications. See Figure 3.1, Master Checklist for Publication Project, and Figure 3.8, Paper Printing Job Organizer.

Additional steps you must take if you are producing an entire journal issue

If you are producing an entire issue, you are acting as the editor. When serving as an editor, you must also:

- locate authors
- coordinate with all participants to avoid duplication
- manage the publication schedule
- edit all text, both substantively and for style
- fact-check if authors won't
- make textual changes after consulting with authors
- submit articles for peer review
- revise as necessary, edit, and fact check
- locate sufficient illustrations if authors don't
- obtain permissions if authors don't
- ensure all text and bibliography are in appropriate style for the journal as expressed in the journal's submission guidelines
- coordinate with the standard journal editor

- manage the shipment of bluelines, page proofs, and mechanicals to all authors for changes and review
- ensure all changes are checked in bluelines, page proofs, and mechanicals, and implemented if appropriate
- ensure all authors receive free copies of their work
- thank all authors in writing

4. How do I plan and develop a monograph?

Monographs are scholarly works on a specialized topic, frequently published by university presses. Skills necessary to produce a monograph are listed in Figure 3.1, Master Checklist for Publication Project, and Figure 3.8, Paper Printing Job Organizer.

• Necessary resources

To create a monograph, you need sufficient resources to complete the tasks listed in Question 3 above. The cost to the park depends on how much of this work your staff can complete. If your staff doesn't already have these skills, you will need to contract:

- researchers
- writers
- editors
- design and layout staff
- indexers
- printers
- binders
- marketing staff

You will have to budget for:

- permission fees for pictures and quotes
- printer's surcharges for last minute changes in text during the blueline, page proof, and mechanical stages of printing
- supplies (paper, glue, and ink)
- shipping charges
- advertising

- review and formal copies to reviewers
- author copies

The costs for a book publication depend upon the size of the edition, the size of the volume, the number of illustrations, the number of changes made to the text during the final production stages (proofs, mechanicals, bluelines), the contracting policies of the publisher, and the contents, and nature of the book.

• Types of monographs

A monograph can be a scholarly book, article, or pamphlet. Commonly, monograph refers to a scholarly bound volume, such as a book.

• Their advantages and disadvantages

See the Publication Formats Summary Chart in Section E, above, Producing a Publication Using Museum Collections.

• Self-publication

Self-publication is a good choice if your park has the skills necessary to research, write, edit, design, index, print, and publicize the book. If not, you would be wiser to consider working with a professional press, at least until you and your publications team have experience to do the work at a professional level.

While a high-quality publication will enhance the park's reputation, a poor publication can damage it, particularly in the scholarly community. It would be better not to publish anything than to publish a slipshod work.

• Working with a publisher

Non-federally funded projects may be printed by any publisher. Federally funded projects, however, must be printed through GPO. It is perfectly appropriate to work with a publisher for a non-federally funded publication *unless* one or more of the following applies.

- Use clearly violates state or federal law or NPS or DOI policies and procedures, such as publishing archeological site, cave, or well locations.
- Use violates NPS ethics policy, such as publishing sensitive data.
 (See MH-III, Chapter 2, Section F.)
- Publisher demands an exclusive license or a long-term contract or agreement.

- Publisher's contract doesn't meet NPS standards as expressed by the NPS solicitor.
- Publisher asks for a type of use that places the museum object at risk physically, such as stress on fragile materials.
- Publisher asks for a use that poses a risk to intellectual property rights, such as producing electronic copies of copyrighted images or images with privacy or publicity related issues for posting on the Web where the images will not be secure from unauthorized downloading, transferring, copying, and manipulation of content.
- Publisher requests the right to use the National Park Service name, the park name, and the arrowhead without obtaining appropriate permissions from the NPS solicitor and the Policy Office.
- Use clearly violates existing agreements with traditionally associated groups.
- Use implies NPS, DOI, or government endorsement of the publisher or the publisher's products.

For further guidance see the sample agreements and contracts in Figure 3.5, Sample Cooperative Publishing Agreement, and Figure 3.12, Memorandum of Agreement for the Joint Production of a CD-ROM.

• Finding a good publisher

Research who is publishing your topic. Talk to discipline specialists. Search the World Wide Web under your topic and the word "publisher."

Go to your local university library and ask the bibliographer on your topic area to recommend publishers who work in your discipline or look in one of the following reference sources:

- Publishers, Distributors & Wholesalers of the United States
 [current year] (this volume is organized geographically)
- Books in Print (contains an alphabetical list of publishers)
- CD-ROMs in Print (contains an alphabetical list of publishers)

• Developing a sample section or chapter

If well prepared, a sample section or chapter is a powerful tool that can be used in:

fund raising

- convincing institutional partners or other authors to work collaboratively
- locating an editor
- finding a publisher

A sample chapter frequently is used as a marketing tool to convince publishers to accept a publication.

• Negotiating with publishers

Before you meet with the publisher you must be prepared.

- Know your park's or center's publication specifications, including paper and binding requirements (refer to Question 3 of this section). For example, the park wants 5,000 8" x 11" hardback volumes with a full-color cover, printed with all indexing, editing, layout, paper selection, and binding done by the publisher.
- Learn what you are forbidden to offer, such as exclusive licenses, granting authorization to publish intellectual property rights you don't have, or access to legally restricted materials.
- Find out how the project will be funded such as what resources
 the park can provide and what must be provided by the publisher or
 by a grant funder.
- Know your human resources and skills the park can supply for this work, for example, can the park do some of the picture research, indexing, or editing?
- Know what partnership resources the park can obtain, such as help from local universities, cooperating associations, foundation funding, the National Park Foundation or National Center for Preservation Technology and Training publication grants.

Examine all publishing contracts carefully. Avoid long-term contracts that lock you in for more than 5 years. Ensure if the book goes out of print, you have a clause allowing the park to reprint it. Review contracts with the contracting office, the NPS Solicitor, and SO staff. Publishers routinely change their standard contracts if the collaborating authors insist. Negotiate! You don't have to settle for the publisher's first offer.

Once you meet with the publisher, do not sign anything for the NPS until the park superintendent, contracting officer, and the NPS solicitor agree the offer should be pursued.

Never grant "all rights in perpetuity" to anyone.

• Creating a publisher's agreement

The following questions should be answered in a publisher's agreement.

- When do payments start to facilitate production cost recovery? Stipulate on which editions the park receives cost-recovery payments. Confirm how much, if any, payment the park will receive. Confirm if the park will receive an advance, and the amount of the advance. Stipulate what cost-recovery payments the park will receive for revised or later editions. (Note: most commonly this funding is paid to the park's cooperating association or the National Park Foundation.)
- What expenses will the publisher pay? For example, will the publisher pay for:

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an index?

a special paper for illustrations?

permission fees for illustrations?

copyediting?
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- What manuscript components must the park provide?

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front matter (tables of contents, introductions, acknowledgments, prefaces)?

text?

illustrations and captions?
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permission to use quotes and images?

back matter (indices, bibliographies, footnotes)?

What are the quality standards the manuscript must meet for acceptance?

Chicago Manual of Style format and style?

- What rights will the publisher have?

North American printing rights?

International rights?

– What happens to the rights if the book goes out of print?

Can the park reprint it?

Can the park put some or all of it up on the Internet?

- Who has the copyrights?

the publisher?

- What rights does the park have to read and correct proofs?

What will the park have to pay for author's alterations to page proofs? (*Note*: authors usually are allowed to make proof modifications of between 5-10% of the initial cost of composition. Changes over this amount usually must be paid for by the park.)

- What number of free author's copies will the park receive?

5-20 copies?

• Defining your responsibilities

Once your negotiations are completed, your publication contract, based upon the publisher's agreement described above, should stipulate precisely what it is you are to produce. Your next step is to identify an appropriate editor, author(s), and decide upon a schedule.

Generally, the park is responsible for the following activities beyond the usual research and writing:

- obtaining permissions for quotes and images
- guaranteeing that the work is original (no plagiarism), non-libelous, and doesn't infringe intellectual property rights of others such as copyright, publicity rights, or privacy rights. See MH-III, Chapter 2, Legal Issues, for guidance.
- indemnifying the press against claims or judgments on copyright, privacy, and other intellectual property rights issues

Scheduling book production work

See the schedule listed under monographs for an example of a book schedule. The time necessary for various stages of production must be determined with the publisher. The publisher probably will attempt to bring the completed work out for a specific merchandising catalog or publication season.

5. What do I receive from the editor and how do I respond?

Check galley or page proofs. You may be asked to review the page proofs (sometimes called galleys) for lost text, missing headers and footers, word breaks, and all other items marked on Figure 3.10, Proofreader's Checklist. Errors must be marked as described in the *Chicago Manual of Style* (14th edition) or in Figure 3.10.

Review mechanicals. Mechanicals are page mock-ups produced by the designer. Mechanicals may be produced electronically and should incorporate type and images. Check these mock-ups as described in Figure 3.10, Museum Management Program Proofreader's Checklist. Watch for photographic completeness and print and line clarity. You should not be editing or changing words at this stage because you will be charged a fee for new typesetting, called author's alterations. You should check only for errors made by the printer.

Check negatives or bluelines. Finally, you must review the negatives made from the mechanicals, called bluelines. A blueline review is your last chance to check the print job. Use it to check for missing elements; smudged, blurred, or broken text; and flipped illustrations.

Mark all errors. Errors found on proofs, mechanicals, or bluelines must be marked as described in the *Chicago Manual of Style (14th edition)*, p. 105, Section 1.1, or in Figure 3.10, Proofreader's Checklist. Proofreading takes two-thirds to three-quarters the time it takes to do data entry. Some professionals cite the average proofreader rate as 4,000 words an hour with an error rate of one error missed on each proof page. Proofreading at each level (page proofs, mechanicals, and bluelines) should be done at least twice (preferably by two different people) to catch these errors.

More complex pages with charts, graphs, tables, foreign language text, technical text, and complex formatting will take longer and have more errors. When doing this work, take a five-minute break every hour or you will lose your focus and concentration. Allow time to check all text several times. Have someone unacquainted with the text review the final copy.

Pay particular attention to where pages, paragraphs, and sections begin; where pages and lines break; where type faces and sizes change; and where other errors frequently occur. Check all mathematical totals with a calculator. Pay attention to every element of the text, even boilerplate. Before this final stage of publication work, you should have completed all of the earlier tasks described above.

6. What other work must I provide?

The publisher may ask you to supply a brief biography and complete a marketing questionnaire. Inform potential publishers that primary markets for publications are park visitor centers and concessionaire shops, catalogs, and Web pages. Other choices might be the publisher's or NPS's Web page shop. Catalog sales and bookstores are other possibilities. You may be asked to provide the names of journals, newspapers, and magazines that might review your publication or to provide the names of potential reviewers.

7. How do I plan and develop a catalog?

Plan a catalog exactly as you would any other book publication. (See the section on book publication above.) Catalogs require scholarly expertise, excellent illustrations, and detailed descriptions of the style, period, materials, schools, formats, genres, themes, iconography, and subject matter of art works or the taxa of natural history specimens, and material culture of contemporary groups and prehistoric cultures for ethnographic and archeological collections. The value of what you do hinges on the quality of your illustrations and authors.

• Resources you'll need

Generally museum exhibition catalogs incur the same expenses as books, such as shipping, advertising, review copies, printer's surcharges for changes to page proofs, and contractors' fees. However, because catalogs tend to be luxury volumes with more illustrations, the costs of some routine items greatly increase, such as:

- permissions fees for quotes and reproductions
- high-quality printing costs, particularly numerous and/or color illustrations
- high-quality paper costs
- contractors' bills for design, editing, and other services

Because of these expenses, oversize blockbuster catalogs usually cost significantly more than most publications to produce. Generally, exhibition catalogs can have poor resale value after the exhibition closes, so they are relatively expensive to underwrite. Many museums seek support from corporations or foundations to underwrite production costs.

• Types of catalogs

A catalog may be a monograph, according to the dictionary definition. However, when most people use the word catalog, they are referring to one of the common types of catalogs described below.

- Catalog raisonne is a complete listing of all works attributed to an artist or school of artists by a scholar(s). This tends to be a fine or decorative arts format with in-depth examination of the artist.
- Collection catalog is an overview of the holdings of a museum, or a vehicle for studies in material culture or natural history.
- Exhibition catalog documents the exhibition themes and the items included in the exhibition.
- Union catalog is an archival term that refers to catalogs that cover the collections of a broad spectrum of repositories, such as all archives or museums in Texas or the entire Region or Support Office area.

• Develop collection catalogs by type of material, media, or format.

Collection catalogs of all types are developed the same. If your catalog focuses on types of material, culture area, period, media, subject, or format, select an editor and authors knowledgeable on these issues.

• Choosing self publication

Self publication is a good choice if you have:

- mastered all phases of publishing, including research, writing, editing, indexing, layout, design, print production, marketing, and distribution
- the ability to view your own work critically and revise it with a professional eye
- extensive publishing experience
- sufficient time to invest in this labor-intensive process

• Working with a publisher

Work with a publisher when you need professional help to produce the highest-quality publication, or when you need someone else to absorb some of the production costs. Before beginning work, have a signed agreement in hand stating your responsibilities and the production schedule.

8. Should I use permanent paper?

Yes, because permanent, high alphacellulose, low lignin, neutral pH paper has a very long life, isn't expensive, and is environmentally friendly. By using permanent paper, you'll ensure that images and information about the park's museum collection will be available for research, education, and interpretation for several hundreds of years! Permanent paper should meet the international permanent paper standard (ISO 9706: 1994; Information and Documentation; Paper for Documents: Requirements for Permanence). In the printing contract specify "ISO 9706: 1994."

R. Producing Moving Images

1. What types of moving images media are there?

Several moving image formats can be used alone or in combinations. These are noted below. The field is evolving constantly with new formats and technological advances. Because of the complexity of formats and recording (gathering) and playback (delivery) equipment, you should always consult with Harpers Ferry Center-Audio Visual (HFC-AV) staff and specialists early in your project. The Interior Service Center, Telecommunications Services Office, may also provide this information.

• *Film:* Both a long-lived image recording system and a playback system. Films are made on stock using a camera and other specialized equipment. All film stocks have a light-sensitive layer called an emulsion and backing support called the base. Film stock has sprocket holes, which allow the camera, projector, editing machine, or printer to transport the film. Film has many formats, ranging from super 8mm, 16mm, super 16mm, and 35mm to 70mm, such as Cinemascope, Widescreen, and Imax. While many feature films are 35mm, 16mm is the most commonly used format.

As an image-recording medium, professional film captures high-resolution images. When you shoot film, you typically archive your camera original and have a work print made. You edit the work print and conform the camera original to the work print. This may be used as the master from which you'll produce copies. If you're making more than 10 copies, you should have an inner negative made of the original. A good lab can produce many copies from a master. This film can be used as is, or transferred to professional format videotape or laserdisc to produce top-quality interpretive shows. You'll need a projection system to show film.

• Video: Both a relatively short-lived image recording system and a playback system. For a new media, it is widely used in industry, home, and film-making. Video has many formats, ranging from Sony High 8, VHS-S, Super VHS, Super VHS-C, to Betacam and D2, which are professional formats. The latter delivers high-resolution images with a superior soundtrack. Video is gaining in acceptance because it is easy to use, portable, and transfers easily into digital technologies. Digital video produces a superior image over traditional analog formats.

You can use video as an image-recording system if you're doing a program on a small budget. Use professional videotape. Video is an inexpensive and easy way to distribute information on the park museum program, either by mail or a television screening. Videotapes wear out with repeated showings, so keep a backup supply. Videotape is both less durable and less expensive than film.

Video Cassette Recorders (VCR) are not as effective as laserdiscs for repeated use. Tapes wear out quickly and require regular maintenance and a backup supply. Videotapes can be transferred to laserdisc format for delivery.

• Laserdisc: Highly recommended as a delivery system because of its low maintenance, reliability, and durability. Because the laserdisc player only plays laserdiscs, film or video must be transferred to that format. However, once the video has been mastered to, and programmed for the laserdisc, it is much more dependable than running a videotape on a VCR. The laserdisc player gives you the option of using a computer controller, and can be controlled from a remote location. You can program alternate modes such as endless repeating, visitor activation, and send signals to dim lights or other timed events. One controller can control two disk players.

With either delivery system (videotape or laserdisc) you can use a monitor of any size for viewing purposes or a projection system.

- New video formats: Video formats are undergoing major changes. New technologies promise to improve greatly the quality of video signals for delivery systems. They are expensive and require special equipment. Professionals probably will move from laserdisc to these new media in the next few years. These new formats include High Definition Television (HDTV) and Digital Versatile Disc (DVD) which require different image recording and projection equipment. DVD has very clean images with few dropouts (a tear in the line), and good sound quality. It can hold video, audio, and computer data. Many DVD machines can play older CD-ROM formats. DVD aims to encompass home entertainment, computers, and business information with a single-digital format.
- 2. How do I plan to make a film or video?

The steps you take to plan to make a film or video are similar to those you take producing sound recordings, Web exhibits, and other publications described in this chapter. You should:

- identify the purpose
- identify your audience
- outline the message and the major points
- identify subject matter specialists
- develop a realistic budget
- select the media type and equipment
- select actors
- select locations
- get permissions
- edit, select music, prepare titles and credits
- 3. What resources will I need?

To produce good moving images, you'll need:

- subject matter specialists, writers, editors and actors
- video or film equipment
- director, producer, and editor
- camera, lighting, sound, and special effects specialist(s)

4. What are the advantages and disadvantages of these formats?

See the following chart.

	Major Advantages and Disadvantages of Moving Image Formats		
Format	Advantages	Disadvantages	
Film	 Better resolution than video. Produces higher quality images than video. More durable and is an archival storage medium Much longer-lived Often used to shoot for editing on video Has a warmer, more blended look 	 Difficult to produce. Requires specialized personnel and equipment. Can take longer to produce Expensive to copy Costs slightly more to produce May require projectionist to run the projection system for 35mm film 	
Laserdisc	 Excellent delivery system Durable but is not an archival medium Low maintenance Reliable Can be made from any videotape or still 	 Not a recording medium, it's only a delivery and distribution medium Expensive Proprietary—not easy to move to next generation of formats Larger than CDs Difficult to produce 	
Video-formats	 Widely used Portability More cost effective to produce and show Can be made from any video or film Easy to edit and produce 	 Analog format makes for a short life span; not an archival medium Quality decreases with each successive generational copy Fragile and short-lived Short-lived Must be migrated (recopied) and refreshed (rewound) every 5 years 	
Digital video	 Digital format Can make copies without any loss of quality; copies as good as the original Superior image quality over analog format 	 Fragile; is not an archival medium Expensive to maintain Must be migrated and refreshed every 5 years 	

5. When is it appropriate to produce a video in-house?

Video is an excellent tool to document storage conditions, damage such as leaks or vandalism, contract work and exhibits installation and removal. You also can use it to do a park history or record staff expertise. You can videotape using a VHS, 8mm, or Hi8 camcorder that has a camera, recorder, and playback mode and allows you to review tape footage readily.

A video inventory of the collection area is useful for individual objects, but video quality doesn't match that of high-quality still images. Video has poor resolution and a short lifetime compared to still images. Unlike still images, it is a poor archival medium, because it wears out after a few years, when the metal particles detach from the plastic backing.

You should use videotape only to document speeches or panels if you have good equipment such as lighting, miking, and multiple cameras, and a skilled person taping the show. If you don't have the necessary equipment and experience, you should contract with a professional.

6. When is it appropriate to work with a professional?

If your video is intended for professional or public outreach and will be viewed by the general public, you should work with or hire a professional. Film and video production is a specialized skill. Don't consider this kind of production without funding.

7. How do I select a film or video maker?

Find a production company or media producer experienced in your subject. The most important factor in selecting film or video producers is to see recent examples of their work. Read reviews of the producer's work. Wherever possible, select the producer based on the staff he or she brings to the project.

8. How do I negotiate with a film or video maker?

Develop a scope of work, budget, and schedule, and draft the contract and product specifications. All contracting must be handled through your contracting office. Consult with HFC-AV to get information on what should be covered in the negotiations.

9. What are the steps involved in production of a film or video?

As the project manager, you need to ensure the steps noted below are completed by qualified professionals.

• Write a Scope of Work.

Outline what the film or video will accomplish, a message summary, the audience, length, delivery system, and format.

• Develop a budget and schedule.

Identify cost, cast, crewmembers, and establish production schedule and phased delivery dates.

• Write a treatment.

Outline what information is to be included, how it will be communicated, length of finished video.

• Write a script.

Approve, review, and revise as needed.

• Outline a shooting schedule.

Show who will do what, when.

• Identify a location for shooting and recording.

• Edit footage.

Review the rough cut.

Review, revise, and approve.

- Produce a fine cut (final product).
- Produce or obtain the deliverables.

Obtain the finished film or video, negatives, large format masters plus all raw footage.

Distribute and market the film or video.

 What is the Harpers Ferry Center - Audiovisual Division (HFC-AV)?

The Harpers Ferry Center-Audiovisual (HFC-AV) Division provides AV support, ranging from planning advice to producing a show. They can advise you on various formats, equipment, and technical specifications. They can assist in evaluating proposals and potential contractors. Consult with the Division on all aspects of your project when you start planning. You can reach them at (304) 535-6081.

HFC-AV recommends the use of standardized equipment throughout the NPS. This equipment can be acquired through the HFC-AV Equipment Depot. If purchased through the Depot, the HFC-AV department will repair or replace this equipment.

S. Producing Multimedia

1. What types of multimedia publications exist?

Three major kinds of multimedia publications are available:

- World Wide Web sites (Web sites), which are on the Internet, can integrate images, texts, links to other sites called hyperlinks, video recordings, sound recordings, and animated icons.
- Compact Discs (CDs) come in a variety of formats including CD-ROMs (compact disc read only memory); CD-R (compact discs-recordable), rewritable CDs, and WORM CDs (Write Once Read Many Times), which can contain video, hyperlinks, sound recordings, and animation; CD-DA (Compact Disc Digital Audio), which are popular music carriers; and DVD discs (digital versatile discs, also known as digital video discs), which are popular carriers for videos and motion pictures.
- Hybrid publications are contemporary publications that can be
 mounted on CDs with updates to the publications placed on a Web site
 over time. This allows for a distributable product that can be kept
 updated daily and periodically, and allow you to use the major
 advantages of both formats of multimedia.

2. How do I plan and develop multimedia publications?

Plan a multimedia publication much as you would any other publication. See the Master Checklist for Publication Project, Figure 3.13.

3. What resources will I need?

To produce a good multimedia publication you will need:

- expert multimedia designers and layout people
- coding experience for preparing links to other sites and pages
- *scanning and software skills* for scanning and retouching images, sound files, text, and video or contract monies to have this done outside
- *topically expert writers and editors* experienced writing information for multimedia in brief, pithy text, and active voice
- knowledge of legal issues, particularly when, how, and why to obtain permissions for intellectual property rights such as copyright, privacy, and publicity concerns.
- *permission and/or fees* for quotes and images
- appropriate hardware and software
- 4. What is the vocabulary of multimedia?
- Multimedia has its own jargon. To work effectively in the field, you should know terms defined in *MH-III*, Appendix A.
- 5. What are the advantages and disadvantages of these multimedia formats?

For an overview of the various advantages and disadvantages of the three formats see the following charts.

Advantages and Disadvantages of Multimedia Publishing Formats		
Format	Advantages	Disadvantages
CDs	 Compact: CDs, like microfilm, can hold huge amounts of data in a small space. Inexpensive: CDs cost only a few dollars to press. The rapidly rising cost of paper can be avoided by distributing in CD format. Searchable: CDs are one of the first fully searchable storage media, making them attractive to researchers. Transferable: Can be copied and compressed without generational loss. Self Correcting: Can contain EDAC (error detection and correction systems) A True Multimedia Format: Widely used to distribute software, music and other sound files, images, videos, and text. 	 Not Updateable: Most CDs, like microfilm, can't be readily updated. Changing Formats: Most CD equipment only plays certain types of CDs. You must refresh and migrate CDs because software and hardware change frequently. Not Necessarily Long Lived: While most manufacturers promise 100s of years of life for CDs, they only warranty their CDs for 10 years. Require Migration: CD contents must be migrated to new formats as software and hardware changes or they will be lost. Damage Easily: CDs fail fast when handled roughly, primarily because of physical stress leading to delaminating, warping, scratching, yellowing of the plastic, oxidation of the aluminum layer. High humidity can make a CD unplayable. Sells Poorly: Cultural CDs produced by museums, historical organizations and archives have sold poorly, leading to a great retreat from their production and sales recently. Games sell well.

	Advantages and Disadvantages of Multimedia Publishing Formats		
Format	Advantages	Disadvantages	
Web	 International: Used internationally in schools, businesses, government, and the entertainment industry. Inexpensive: The major costs of the Web are in the publication preparations, such as writing, editing, and design, thus skipping the cost of paper, printing, shipping, and advertising. Use of the Web is free. Searchable and Linkable: The Web is fully searchable and sites can be linked together with hypertext to lead to a fully interactive non-linear learning environment. Web sites can also be linked to CDs so that a hybrid system is produced in which unchanging data rests on the CD and updates are linked to the CD and placed on the Web. Viewers can seamlessly navigate between the two at the click of a mouse. Easy to Update and Change: Doesn't require new editions, just a few changes in code and materials to change a site. Multimedia Format: Provides access to still and moving pictures, and sound clips. Has capability to display 360-degree panoramic images. Reaches Masses: Used by over 40+ million readers regularly, including schools, offices, organizations, and many homes. Reaches large numbers of the public who might never visit national parks. Provides NPS information about resources to the public. Allows for planning trips and research not ever provided before. 	 Limited Access: Many schools, libraries, corporations, and homes lack access to the World Wide Web, or can only handle the text version. However, there is a dramatic increase in access to the Web. Amateur Quality: Many users assume that because Web work is inexpensive and easy to learn anyone can do it. Much poor quality work goes up on the Web. The Web also requires considerable maintenance and upkeep. Lost in CyberSpace: Unless your Web site structure is useful, your links helpful, your content rich and accurate, and your pages well identified, you will rapidly lose your audience, which can escape from your site with the click of a mouse. Garbage In and Out: The Web is so easy to produce, a lot of error-ridden garbage appears there. To keep the public's imagination, you must update your site regularly with high-quality content and new features. Speed: Downloading can take a long time and is limited by the user's hardware. Evaluation Necessary: Much of the public doesn't know how to evaluate the Web's contents, so Web resources often are used inappropriately. 	

6. When is it appropriate to produce a Web page or CD-ROM in house?

Produce a Web page or CD-ROM publication in house when all of the following apply.

- You have the appropriate design, writing, coding, and editing skills.
- You have permission from your supervisor, superintendent, and publications officer.

- You have contacted your park Web specialist, center, or program about mounting your materials and maintaining access to your subdirectory, as well as your cluster Web coordinator.
- You are aware of the legal issues involved in such work and have obtained all necessary permissions.
- You have the time, energy, skill, training, experience, and resources to do it well and update it regularly.
- 7. What do I need to know to produce a museum collections Web site?

To produce a museum collection site you need:

- html coding, including knowledge of metadata to facilitate search engines in finding and indexing your site
- the basics of multimedia design and layout (look at other sites to see a range of solutions), and accurate, interesting, and well-written information
- high quality visuals and sound files
- 8. How do I produce a museum collections Web site?

Follow the steps in the Figure 3.1, Master Checklist for Publication Project.

9. What do I need to know to produce a CD-ROM?

The skills are the same as for Web sites, but you must also:

- develop an advertising and marketing plan for the finished product
- determine what operating system your CD will use
- determine if you want your product to link to a Web site as a hybrid CD
- 10. How do I produce a CD-ROM?

You can use CDs as back-up files to document Web sites or as publications. CD-ROMs can be produced by downloading a Web site to a CD to make a permanent copy. For commercial CDs, you should follow all the standard publication steps described for Web publishing. When a publication-quality CD is desired, follow the Web publishing process above, but add a marketing and packaging step after publication to ensure the publication reaches the widest audience.

11. What is an online order fulfillment service?

An online order-fulfillment service is an electronic stock image agency or image bank that provides image, video, or sound files to publishers, authors, and filmmakers for a fee.

Many contemporary agencies provide watermark-protected thumbnail (small) images of the files over the World Wide Web and allow clients to purchase materials electronically through telephone or Internet-based funds transfer. A watermark is a marking system built into the image.

When online order fulfillment services ask to incorporate your materials, they generally expect to profit from them. Be careful not to give these groups copyright, privacy, publicity law protected images, or exclusive licensing. Commercial use of these materials carries stringent penalties. See *MH-III*, Chapter 2, Legal Issues.

You might investigate the possibility of all sales generating a small royalty to be given to your cooperating association for preserving the park's collections, or to fund new digital publications.

12. How do I negotiate with potential order fulfillment services and multimedia publishers?

Familiarize yourself with the legal and ethical issues described in Chapters 1 and 2 of *MH-III*. Read the Digital Publication Project Checklist, Figure 3.11, for a summary of issues. Ask to see copies of the contracts used by the corporation when dealing with private and public museums, archives, and libraries, and when negotiating directly with photographers. Determine cost recovery, what level of initial payment, credit line, caption and context control, and other control you will have. Get the offer in writing.

Don't agree to exclusive or perpetual licensing arrangements with order fulfillment services or multimedia publishers.

Work with the contracting office, the SO curator, and the NPS solicitor to consider the contract or agreement. Remember that equal access is a fundamental principle.

13. How do I select a multimedia publisher or producer?

Select a multimedia publisher or producer the same way you select a publisher or producer. Research who is producing material on your subject. Read their reviews. Check the products they have produced. Ensure their work is done with qualified discipline specialists, rather than programmers. Talk to discipline specialists and multimedia bibliographers for recommendations.

T. Producing Sound Recordings

1. How do I plan and develop a sound recording?

The steps you take to plan and develop a sound recording are similar to those you take in doing any publication. You should:

- identify the purpose of the recording
- identify your audience
- outline theme(s) and major points or programs
- develop a budget and schedule
- select a producer/project manager

- select the recording format
- select art and design work, if appropriate
- prepare and edit the script or program
- select a narrator, performer(s) or musician(s)
- obtain all necessary permissions
- tape the narrator, performer(s) or musician(s)
- review the recording
- edit and mix the recording
- produce a master in digital format with working copies and appropriate labels
- · duplicate the recording
- market and distribute the recording

Once you've identified the purpose of the recording project, you should ask the following questions.

- Is it for in-house training or informational purposes only?
- Will it be used for visitor education?
- Will it be used for general distribution?

Answers to these questions, combined with your budget will allow you to make appropriate plans to record and produce a sound recording.

2. What resources will I need?

To produce a good sound recording publication you'll need:

- subject matter specialists, writers, editors or narrators, performers such as musicians or singers
- recording equipment
- recording engineers and editors
- knowledge of legal issues and how to obtain permission for recording and performance rights

You should contact the HFC-AV for additional information on technical sound matters.

Consider the following when developing the budget:

- script or program preparation (writing and editing)
- outside director or producer fees, if used
- creation and recording of custom music
- · creation of artwork for cover and inserts, if used
- reproduction rights and cost to use other recorded material
- recording studio time
- mixing and sound editing
- printing and duplication
- marketing
- 3. What are the major types of audio formats?

The major types of audio formats include:

- cassette
- microcassette
- 1/4" reel-to-reel
- CD (compact disc)
- minidisc
- DAT (digital audio tape)
- 4. What are the advantages and disadvantages of these formats?

See the following chart.

Major Advantages and Disadvantages of Sound Recording Formats		
Format	Advantages	Disadvantages
Cassette	 Widely used delivery format; can also be used for sound capture (recording) Excellent for lectures, music distribution and transcription Portable and easy to store Available everywhere High-bias tape with Dolby noise reduction gives excellent results, especially when working with music 	 Analog format has lower fidelity (audio quality) than a CD; tape hiss and noise High maintenance Relatively limited life span; not an archival medium Not recommended for repeat playback due to rewind time and tape life Loses quality with repeated use
Microcassette	 Used primarily for dictation and transcription Trouble-free field recording of the voice Compact size Convenient 	 Extremely low audio quality and short lived; not an archival medium. Not suited for music Not as widely used as the standard cassette and not used by production professionals Equipment not widely available
1/4" Reel to Reel	 Sound quality as good as or better than cassette Durable Commonly used in studio work 	 Equipment is expensive and not commonly available More expensive to copy Tape stock is more difficult to obtain
Compact Disc (CD)	 Excellent delivery system Provides the highest quality for music and voice recordings Ideal format for repeat playback necessary in exhibitions Format of choice for popular music distribution and sale 	 Higher costs than cassette for mass production Not an archival medium; refer to Conserve O Gram 19/19, Care of Archival Compact Disks More difficult to move (migrate) to new formats Formats can change and are not compatible so older CDs become unplayable
Digital Audio Tape (DAT)	 Digital format used by professionals Used for production purposes and mastering with no loss of quality Has CD quality 	 Not an archival format Not as durable as CDs Not yet tested by conservators for durability

Major Advantages and Disadvantages of Sound Recording Formats		
Format	Advantages	Disadvantages
Minidisc	Excellent sound qualityEasy to edit and access tracksGood repeat playbackCompact	 Not yet tested by conservators for durability Relatively new format, equipment and titles not as available as CD or cassette May not be playable when the format changes No industry standard

5. When is it appropriate to produce a sound recording in-house?

Produce a sound recording in-house when you have:

- appropriate writing and editing skills or narration, performance or musical skills
- to make the recording for information purposes only
- sound recording equipment and know how to use it
- authorization from your supervisor, superintendent and publication coordinator
- familiarity with legal issues and have obtained all necessary permissions

If you're interested only in the informational value of the sound recording for in-house use, you don't need special skills to record an interview or tape an oral history. You can get good results by using a quality hand-held cassette recorder or a desktop unit with one or two good microphones.

Practice with the equipment until you're comfortable, and then do the final taping. Rehearse the material whether it's a script or music, but not for an oral history interview, before you record. You should record several versions so that you can select the best one.

However, if you plan to use the recording for an audio, video or film production, you should use the services of a professional sound engineer and professional recording equipment. This includes a high quality professional microphone and tape recorder with monitoring during recording capability. Contact HFC-AV at the beginning of your project. HFC-AV will give you information on formats, sound engineers, equipment, and duplication services.

6. When can I use historic recordings or instruments?

Many available historic recordings and instruments are not pristine, but this shouldn't be the overriding factor in deciding whether to use them. A scratched old recording of a historic event or person, such as Thomas Edison, adds feeling, color, and dimension to a soundtrack.

Sound engineers have discovered useful information in background noise on older recordings. Don't automatically wipe this information out when you migrate your sound recordings to a new format.

Take great care when handling these materials. If the sound is good enough, work from duplicates whenever possible. Old recordings can be restored, but this is an expensive undertaking. Consult your SO curator, a conservator, and staff at the HFC-AV.

7. What must I do to locate a good sound publisher?

Contact HFC-AV for information on locating a good sound publisher, or for any other sound recording questions you have. Get recommendations from local museums, television and radio stations, and other organizations. Find out who published a product you like and call them for information. You also can access information on the Internet.

U. Identifying and Developing Special Skills

1. What skills are required to produce sound and multimedia publications?

The same skills are necessary for all publications: research, fact-checking, writing, editing (both substantive editing and copyediting), and design and layout. The only new skill required is mastering the technical aspects of the publishing, such as html coding and online proofreading. When these skills are added to a thorough knowledge of your audience, you can produce an excellent publication, regardless of the medium.

2. How do I learn to produce NPS publications?

Obtain training and experience by:

- taking courses at your local university
- working alongside partners or contractors trained in this area
- working first on small projects, then taking on more significant publications as you gain expertise
- if producing a paper publication, working with your regional printing coordinator
- if producing a Web publication, working with your region's Webmaster
- reviewing a broad range of NPS publications
- reviewing museum publications from all sources
- consulting with appropriate HFC-AV and Denver Service Center (DSC) staff as you start planning your publication.

3. What do I look for when reviewing resumes and portfolios of non-NPS publication contractors?

Look for long-term experience, especially experience specific to your project. Ask for copies of their work. Read reviews in appropriate publications. Ask your local librarian to help you find publication reviews. You must work with your contracting officer to hire any contractors.

4. How do I contract or partner?

You must work with your contracting office, SO staff, and supervisor to arrange for partnerships, memoranda of agreements, or cooperative agreements. The formats and requirements for these documents and agreements vary over time. See examples of some current contracts and agreements in the figures section, for example, Figure 3.5, Cooperative Publishing Agreement, and Figure 3.12, Memorandum of Agreement. This work probably will require a scope of work, a contract, bids, and personnel selection.

5. What is a scope of work?

A scope of work is a document that lists the tasks, responsibilities, and activities involved in a particular job or area. The tasks listed under each type of publication in this chapter are the basic activities you would be listing and assigning to staff in a scope of work.

6. What is a contract?

A contract is a legally binding agreement between two parties that states what each party will do and when. All NPS contracts must be processed through the contracting office. Provide the contracting office with a draft contract outlining the details of what is required, deliverables (products), work, and payment schedule.

The Contracting Officer (CO) finalizes and issues the contract. You may be designated, in writing, the Contracting Officer's Technical Representative (COTR) by the CO. As COTR you assist in the administration of a contract under the provision of the DOI Acquisition Regulation (DIAR) 1401.670.2 and as outlined in the letter of designation. The COTR is not empowered to:

- award, agree to, or sign any contract (including delivery or purchase orders) or modification of any contract
- obligate the payment of money by the government
- make a final decision on any contract matter concerning a dispute
- terminate for any cause, the contractor's right to proceed
- take any action that may have an impact on contract or schedules, funds, or scope of work

All contractual agreements, commitments, or modifications that involve prices, quantities, quality, or delivery schedules can only be made by the CO. Work with the CO to authorize payments after the satisfactory products(s) have been delivered.

7. Who handles bids?

Your CO handles all aspects of the bid process.

8. How do I market my publications?

You can market your publication by:

- providing review copies to high-profile reviewers, such as *Library Journal*, *Choice*, and *College and Research Libraries*
- providing your publisher with a complete list of journals that should receive review copies
- providing your publisher with a complete list of likely reviewers
- sending out announcements to mailing lists of your professional organizations
- posting announcements on discipline specific "listservs" and electronic bulletin boards
- purchasing advertising in journals and newsletters
- placing handouts on announcement tables at professional organizations
- asking colleagues to submit the work for publication awards
- placing ads in your professional journals to alert colleagues to the publication
- issuing press releases upon publication to key newspapers and journals
- posting announcements and messages about the publication on Internet bulletin boards and listservs
- sending announcements of Web publications and appropriate index terms to appropriate search engines
- including good descriptive terms and metadata in the file headers of the NPS Web site to help the work of search engines.

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